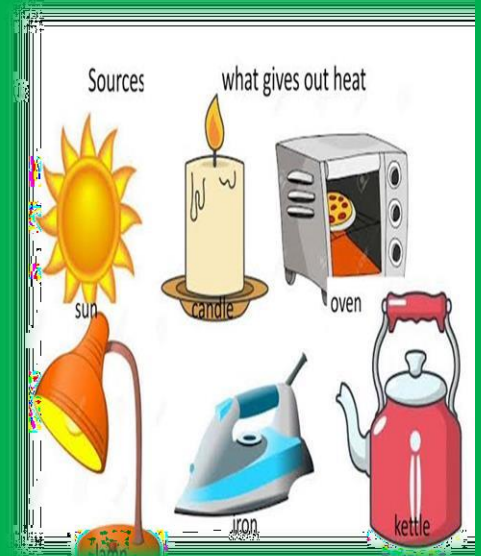


# RATIONALISED SCIENCE AND AND TECHNOLOGY NOTES

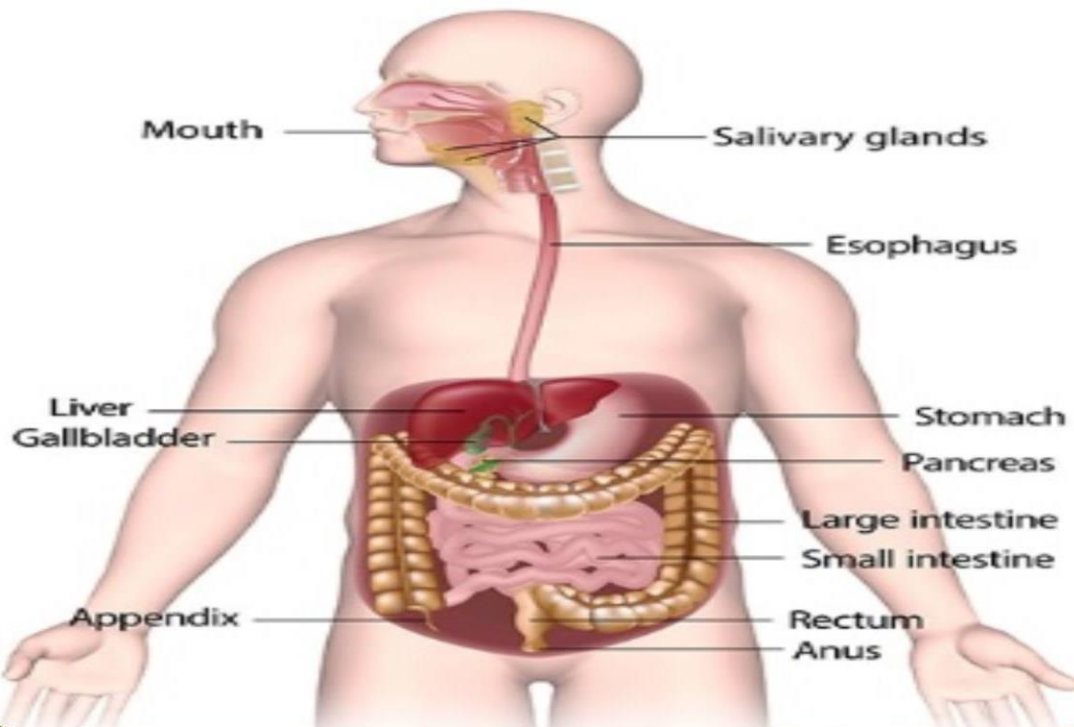


**GRADE**

**4**



## The Digestive System



# LIVING THINGS AND THEIR ENVIRONMENT

- Things that have life are called **living things**.

Examples of living things are **plants** and **animals** such as human beings, cats, dogs, lions, butterflies, and others.

- Things that do not have life are called **non-living things**.

Examples of non-living things are **books**, **buildings**, **table**, **soil**, **water** and **air**.



# 1. Plants

## **Characteristics of plants as living things.**

- They feed
- They grow
- They breath
- They remove waste
- They move they die
- They reproduce.

## **Growth in plants**

When you plant a seedling, it increases in size and weight after sometime. Therefore, plants are living things.

## **Reproduction in plants**

The ability of a plant to make a new one is known as reproduction.

Mature plants produce flowers.

The flowers produce fruits.

The fruits produce seeds.

Therefore, plants are living things.

## **Removal of waste materials in plants.**

Plants remove waste gases through tiny holes in their leaves. Other plants remove gum as waste product. This process helps them stay healthy and grow well.

## **Response to changes in the environment**

Plants respond to changes in the environment such as light and water. Its leaves grow towards the light. Its roots grow towards down into the soil to find water.

## **Breathing**

When leaves are put in water, we see bubbles of air.

The bubbles stick to the leaves.

The bubbles show that leaves breathe.

## **Death in plants**

Plants die because of various reasons. It could be due to;

- Lack of water.
- Eaten as food by animals.
- Cut by people.

## **Handling plants**

When you want to observe plants you should handle them with care, you should also wear protective gears to protect you from harmful plants

- Wear dust coat, to keep your clothes clean

- Wear goggles to protect your eyes
- Wear gloves to protect your hands
- Use forceps and tongs to turn over a plant leaf
- Use magnifying lens to see small holes on leaves.

Wash your hands after handling plants

Plants that grow in the locality are; maize. Beans, sugarcane, vegetables, tea, potatoes and many others.

## **Functions of external parts of a plant**

### **1. Roots**

Roots help a plant in the following ways.

- a) Roots hold the plant firmly in the soil.
- b) Roots of some plants store food, for example a carrot plant.
- c) Roots absorb water from the soil into the plant.

### **2. stems**

- a) A stem holds the plant upright. It supports the branches.
- b) Leaves grow on the stem.
- c) Stems of some plants store food, for example sugarcane.

### **3. Leaves**

- a) Leaves make food for the plant.
- b) Plants can remove waste through the leaves.

# Importance of plants in the environment

## Caring for plants



Plants can be cared for in various ways. Some of the ways of caring for plants include watering, mulching and manuring.

### Watering

- a) Plants need water to grow.
- b) Water plants when the soil feels dry to the touch.

c) Give plants just the right amount of water, not too much or too little.

d) Water in the morning or evening when it is cooler. Mulching

a) Mulch is like a blanket for plants.

b) Spread mulch around plants to keep the soil moist and cool.

c) Mulch can be made from things like leaves, straw, or woodchips.

d) Mulching also helps to prevent weeds from growing. Manuring

a) Manure is like plant food.

b) It gives plants nutrients they need to grow strong and healthy.

c) Spread manure around plants, but not too close to the stems.

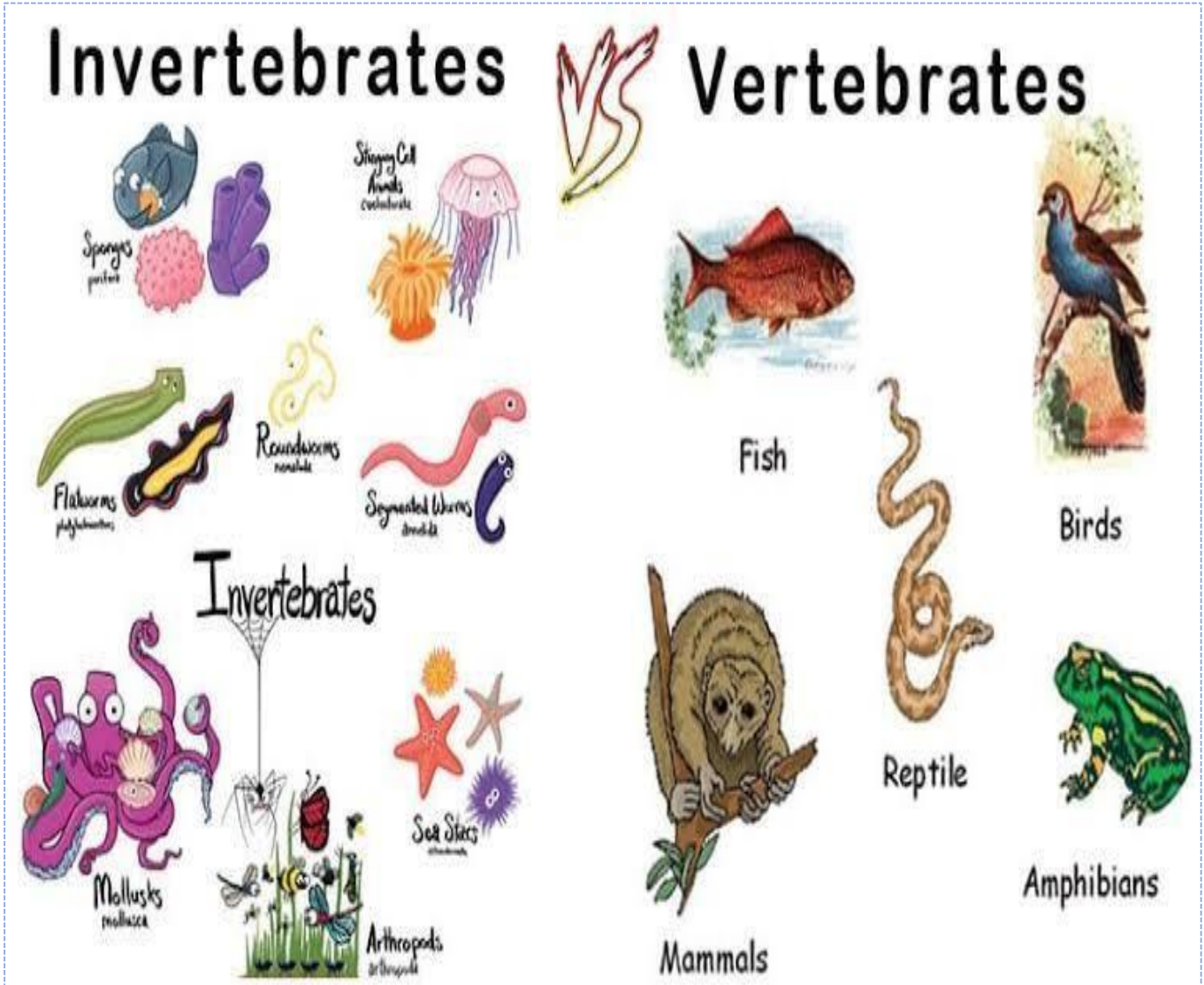
d) Manure can be made from composted animal waste or other organic materials.

## 2. Animals

### Characteristics of animals

1. Animals grow.
2. Animals respond to changes in the environment.
3. They die.
4. They feed.
5. They reproduce.
6. They move.
7. They remove waste.

# Vertebrates and Invertebrates



**Vertebrates** are animals with backbone.

**Invertebrates** are animals without backbone.

## Examples of Vertebrates

1. Goat
2. Human
3. Hen
4. Fish
5. Frog
6. Sheep
7. cow
8. dog
9. crocodile

## Examples of Invertebrates

1. Spider
2. Butterfly
3. Fly
4. Slugs
5. Ants
6. Cockroaches
7. Millipedes
8. Ticks
9. Spiders
10. Worms
11. Crabs

## Handling animals


Precautions to take when handling animals are;

- Use pair of forceps to pick and observe small animals.
- Wear gloves when holding a frog
- Wear overcoat to protect the body and clothes.
- Observe safety for animals
- Wash hands and change clothes after handling animals

## Importance of animals

### Caring for animals





Animals can be cared for in various ways. Some of the ways of caring for animals include cleaning animals' house, spraying the animals with insect repellent to keep bugs away and providing fresh water for the animals to drink every day.

#### Cleaning the Shed

- a) Keep the animal's living area clean.
- b) Remove any dirt or waste regularly.
- c) Make sure there's enough bedding for comfort.

#### d) Spraying the Cow:

Spray the cow with insect repellent to keep bugs away.

- a) This helps keep the cow comfortable and healthy.
- b) Pay special attention to areas where bugs like to gather. Watering and giving food
  - a) Provide fresh water for the animal to drink every day.
  - b) Feed the animal the right amount of food for its size and type.
  - C) Make sure the food is nutritious and suitable for the animal's diet.

**Revision exercise 2**

1. Complete the following sentences by filling in the correct word.

- a) When animals give birth to young ones we say that they have \_\_\_\_\_.
- b) Most animals have \_\_\_\_\_ eyes
- c) When animals eat grass we say that they \_\_\_\_\_.
- d) Before a chick hatches it was an \_\_\_\_\_.

2. Name the following

- a) A digital device that can take photographs \_\_\_\_\_.
- b) The last stage of an animal \_\_\_\_\_ (death, growth)

A domestic animal found in many homes used for security

3. Write true or false

- a) All animals are living things \_\_\_\_\_.
- b) All animals eat the same food \_\_\_\_\_.

4. Write the seven characteristics of animals as living things.

- a. \_\_\_\_\_.
- b. \_\_\_\_\_.
- c. \_\_\_\_\_.
- d. \_\_\_\_\_.
- e. \_\_\_\_\_.
- f. \_\_\_\_\_.
- g. \_\_\_\_\_.

5. Which animal should not be in this group? Why?

Elephant, antelope, Crocodile, giraffe, snail

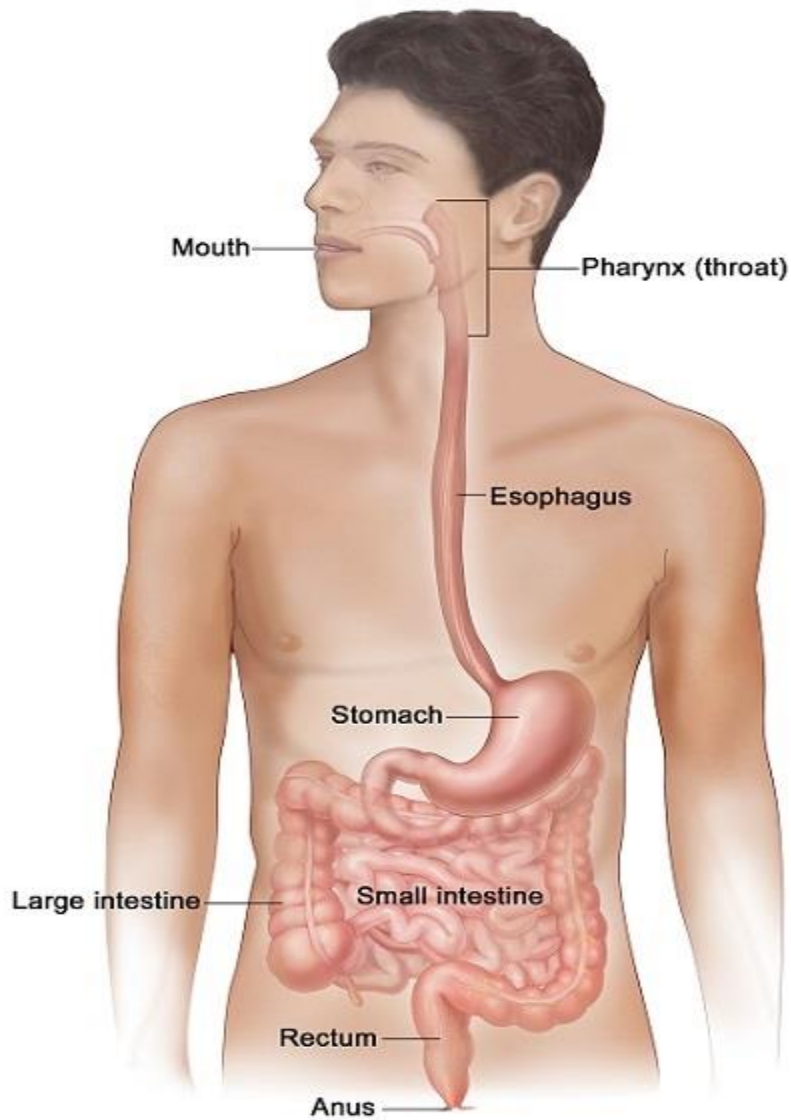
Animal: \_\_\_\_\_.  
Reason: \_\_\_\_\_.

6. Write two ways of keeping safe from dangerous animals.

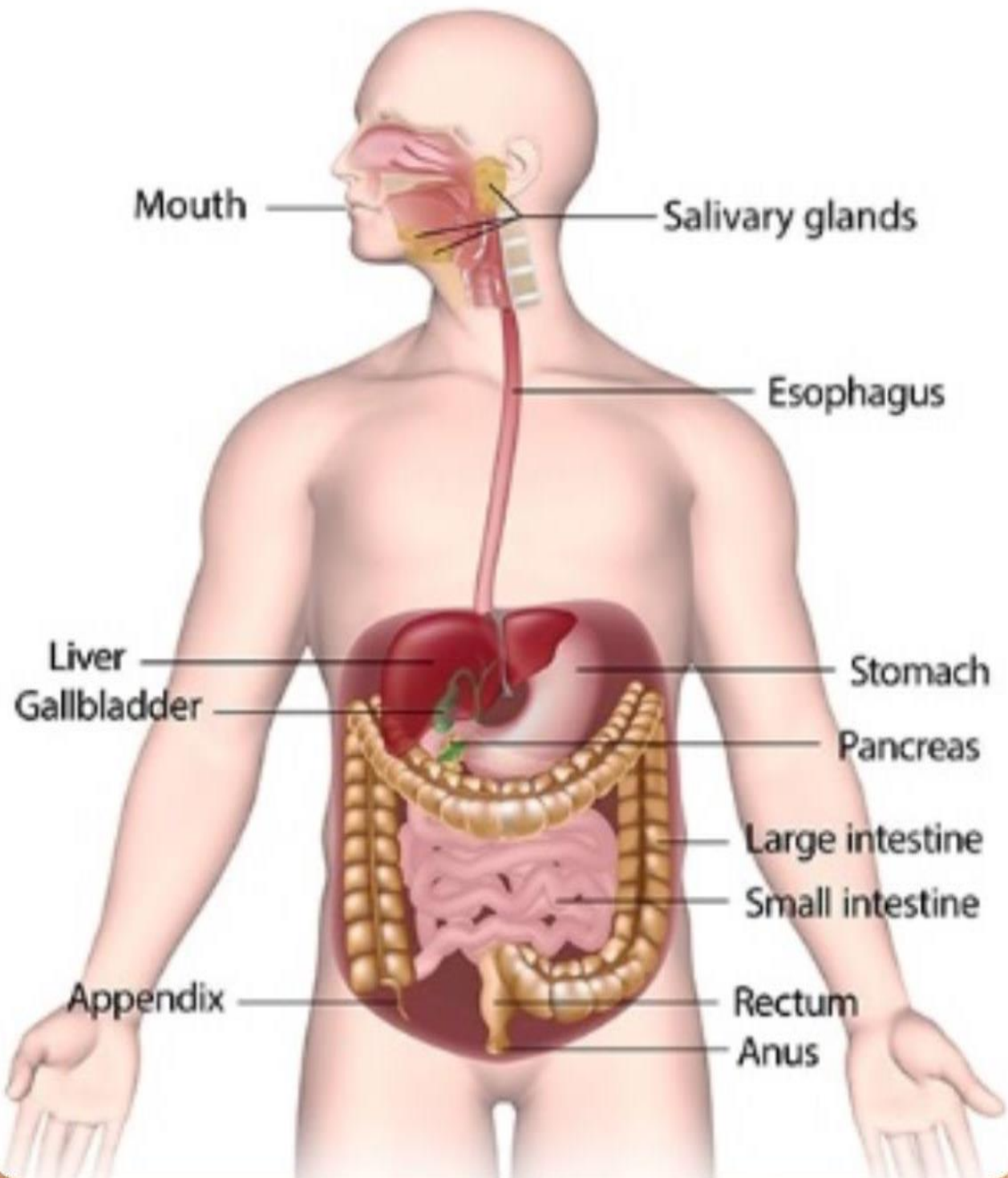
- a. \_\_\_\_\_.
- b. \_\_\_\_\_.


# Human digestive system

## Human Digestive System Diagram



# The Digestive System





## Functions of parts of digestive system

### (i) Functions of the Mouth

1. Food is chewed using teeth.
2. Food mixes with saliva.

The teeth in the mouth are used to chew, cut, tear and grind food.

### (ii) Functions of the Oesophagus

1. This is the passage of food from the mouth to the stomach.
2. It is also called gullet or food pipe.


### (iii) Functions of the Stomach

1. This is a food storage.
2. Food mixes with digestive juice.

**(iv)** Pancreas—is where pancreas juice is formed that mixes with food.

**(v)** Liver--- produce bile juice which break down fats and absorbs digested food s

### (vii) Functions of Small Intestine

- 
1. This is a place where food mixes with digestive juice.
  2. Digested food is absorbed into the body in the small intestine.

### **(viii) Functions of Large Intestine**

1. Water and mineral salts are absorbed in the large intestine.
2. There is no digestion in the large intestine.

### **(ix) Functions of the Rectum**

1. This is where undigested food is stored.

### **(x) Functions of the Anus**

1. This is the passage of undigested food from the body.

## Healthy digestive system

### Symptoms of unhealthy digestive system

The following are some symptoms of unhealthy digestive system.


- a) **Stomach ache**- This is where a person feels pain in the stomach.
- b) **Bloating** – This is where a person’s stomach is full, tight and appears swollen.
- c) **Worms**- Sometimes tiny worms can live in our digestive system. They can enter our bodies when we eat dirty fruits and vegetables. These worms can make us sick.
- d) **Diarrhea**- This is where a person passes watery stool many times.
- e) **Vomiting** – This is when a person’s stomach pushes out the food through the mouth.
- f) **Constipation**- This is where a person has difficulty in removing waste or faeces out of the anus. This can make a person feel uncomfortable.

A healthy digestive system is important to prevent the symptoms mentioned.

### Ways of maintaining healthy digestive system

The following are the ways of maintaining a healthy digestive system:

- a) We should clean our teeth and mouth after every meal.
- b) We should regularly take medicine to deworm.
- c) We should practice healthy eating. Avoid eating sweets and other sugary foods.
- d) We should wash our hands before and after eating.



e) We should wash fruits and vegetables before eating.

f) We should always drink clean boiled water.



## **Importance of maintaining healthy digestive system**

The following are the importance of keeping our digestive system healthy:

- a) A healthy digestive system helps protect against harmful germs.
- b) A healthy digestive system helps us maintain a healthy weight.
- c) A healthy digestive system helps to break down food well.
- d) The digestive system helps to properly remove waste from the body.

## Revision exercise

1. Most digested food is absorbed in the \_\_\_\_\_
2. Draw and name the types of teeth

3. The two types of teeth used for chewing food are

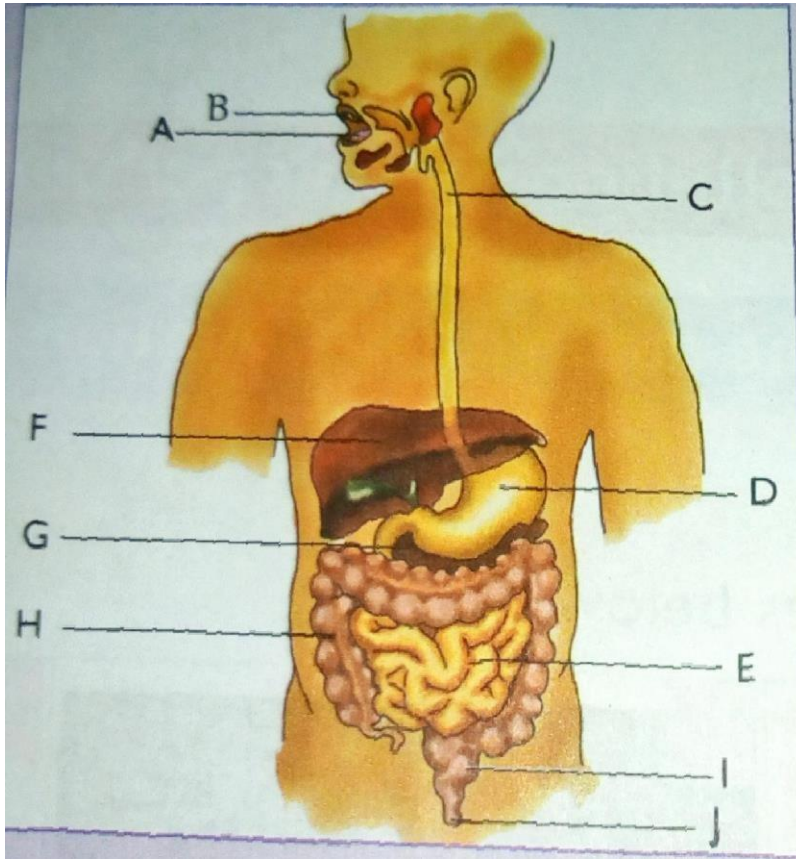
- a. \_\_\_\_\_  
b. \_\_\_\_\_

4. I have \_\_\_\_\_ teeth in my mouth

5. State the function of the following parts of the digestive system

Part	function
Salivary gland	
Pancrease	
Liver	
Rectum	

6. Name the parts of the digestive system



7. Choose the correct statement

- a) The small intestines are short and highly coiled
- b) The esophagus is a thin-walled tube
- c) The saliva in the mouth is just water.

8. Fill in the blank spaces

- a) The \_\_\_\_\_ is a thin Long tube that connects the mouth and the stomach
- b) The small intestines are \_\_\_\_\_ to allow complete digestion and absorption of food.

## Revision exercise 4

1. Write true or false in the sentences below.

- a) Smoke make us develop breathing problems \_\_\_\_\_
- b) Staying in a clean environment is healthy \_\_\_\_\_
- c) It is not bad to play near a smelling toilet \_\_\_\_\_
- d) Bad smell can cause stomach problems \_\_\_\_\_
- e) Air pollution affects growth of plants \_\_\_\_\_

2. Mention three healthy eating habits.

- a. \_\_\_\_\_.
- b. \_\_\_\_\_.
- c. \_\_\_\_\_.

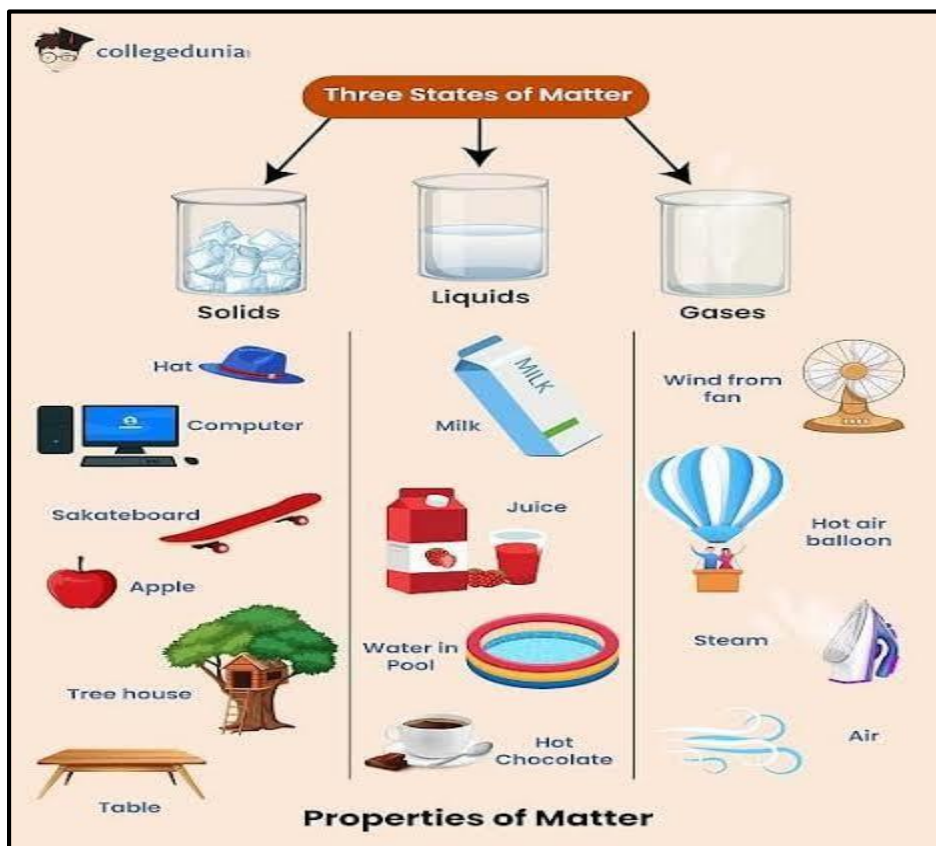
3. Draw the human digestive system.

4. Outline three ways of keeping our digestive system healthy.

- d. \_\_\_\_\_.
- e. \_\_\_\_\_.
- f. \_\_\_\_\_.

# MATTER

Matter refers to anything that has mass and occupy space.



# Properties of the three States of matter

- Matter is anything that occupies space and has mass.

## States of Matter

There are three states of matter:

1. Solids
2. Liquids
3. Gases

## Solids

### Characteristics of Solids

1. Solids have **definite shape**. One can tell the shape of solid. The shape can be **regular** or **irregular**.
2. Solids have **definite volume** or **size**. The volume of solid can be **measured**.
3. Solids have **definite mass**. Some solids are **heavy** while others are **lighter**.

## Examples of Solids

- Sugar
- Rock
- Wood
- Glass
- Table



## Liquids

### Characteristics of Liquids

1. Liquids **do not have definite shape**. They take the shape of the container.
2. Liquids have **definite volume**.
3. Liquids have **definite mass**. They may be lighter or heavier when two are compared.

### Examples of Liquids

- Water
- Milk
- Blood
- Urine
- Bromine



## Gases

### Characteristics of Gases

1. Gases have **no definite shape**.
2. Gases have **no definite volume**.
3. Gases have **definite mass** that's why an inflated balloon lifts a deflated balloon when placed on a beam balance.

### Examples of Gases

- Carbon dioxide
- Ozone
- Nitrogen
- Hydrogen
- Freon

**Revision exercise**

- 1 In a \_\_\_\_\_ shape does not change( solid, liquid,gas)
- 2 Shape of a \_\_\_\_\_varies with that of the container ( solid, liquid, gas)
- 3 Putting soil in a container is \_\_\_\_\_ ( filling, emptying)
- 4 Pouring soil out from a container is \_\_\_\_\_( filling, emptying)
- 5 One big bottle is filled by \_\_\_\_\_small ones(one,many)
- 6 Many small containers fill \_\_\_\_\_big container (one,big)
- 7 Small balloons need \_\_\_\_\_air to fill ( little,a lot)
- 8 Large balloons need \_\_\_\_\_of air to fill in( little,a lot)
- 9 Different colors but same size balloons fill with \_\_\_\_\_amount of air( equal, different)
- 10 Name the three states of matter and their characteristics

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

- 11 Write the safety precautions to take when working with different substances.

a. \_\_\_\_\_

## Importance of the different states of matter

The following are some of the importance of the states of matter.

### Solids

- a) Solids give objects their shape and strength.
- b) Many solids are used for building. They are used for building things like houses and cars. They are also used as food for example bread.

### Liquids

- a) People and animals drink water. Plants need water to grow.
- b) Liquid detergents are used in cleaning.

### Gases

- a) We use cooking gas in our gas stoves
- b) We fill balloons, balls and tyres using air
- c) Oxygen, a gas in the air, help us to breathe and is needed by many other living things to survive.

# MANAGEMENT OF SOLID WASTE



- Solid waste is a type of waste that consists of everyday items that are thrown away by people.

- Solid waste is also known as rubbish, garbage or trash
- Solid waste comes from our offices, homes, schools, Industries and hospitals among other places.
- Solid waste management is the process of collecting, Treating and disposing of solid waste. It's about how solid Waste can be changed and used as a valuable resource.

### **Types of solid waste**

- Wastes are classified as both those that decompose easily and Those that do not decompose.
- For example:
- Tomato fruit breaks down and starts to rot and eventually becomes part of soil. This is called decomposition.
- The plastic bottle did not show any change after a week. Therefore, the plastic bottles do not rot. It cannot decompose.

### **Dangers of solid waste to the environment**

The following are some of the dangers of solid waste.

- a) Solid waste can make the air, water and soil dirty.
- b) Solid waste attracts rats and mosquitoes which can spread diseases.
- c) Animals can eat the solid waste and get sick. They can also get stuck in it.
- d) Dumping solid waste can harm plants.
- e) Rotting solid waste sometimes smells bad which is unpleasant to be around.

## Methods of managing different types of waste



- Different types of waste are managed differently. These ways include the 3Rs – Reusing, Recycling and Reducing.

### a. Reusing

Some solid waste can be used again for their original purpose Or for different work. For instance, discarded bottles can be Cleaned and used for bottling drinks, or used at home for other tasks.

Other reusable solid waste include boxes, bags, old clothes, Books, old newspapers and wood.

## **b. Recycling**

Recycling solid waste means that the material is reprocessed before being used to make new products. All types of organic waste can be recycled by composting.

Other solid wastes that can be recycled include paper, waste metals, glass and plastic bottles, among others.

## **c. Reducing**

Waste reduction is a set of processes and practices intended to reduce the amount of waste produced.

It is a way of preventing materials from ending up as waste.

This can be done by buying products with less packaging, making use of reusable rather than disposable items, using your own shopping bags, minimizing food waste and repairing and maintaining items such as clothing, so that they last long.

Solid waste can be reduced through the following ways;

- Avoiding using plastic bags to carry items. Instead use baskets.
- Using reusable (canvas) bags for buying items
- Borrowing, renting or sharing items that are not regularly used.
- Using sponges or dish clothes instead of paper towels.
- Using plug-in appliances instead of battery operated gadgets.
- buying durable and repairable products.



## **Safety measures in solid waste management**

The following are ways of keeping safe when handling waste.

- Wearing gloves and masks.
- Using tools like rake or shovel to pick up or move waste.
- Washing hands after handling waste.

## **Importance of managing waste**

There is a need to manage waste properly for the following reasons.

- a) Managing waste properly prevents pollution of air, water and soil, which can harm plants, animals and human beings.
- b) Poor disposal of waste can harm or kill animals that eat it.
- c) Managing waste properly reduces health risks associated with exposure to hazardous waste materials.
- d) Recycling and reusing waste materials conserves natural resources and reduces the need for new raw materials.
- e) Managing waste properly keeps the environment clean and attractive.

# Water conservation



## **Ways in which water is wasted**

Wasting water means using more water than is necessary. We use water every day. Almost every activity we do includes use of water. Therefore, we should use water without wasting it.

Water can be wasted at home in the following ways.

- a) Leaving the tap running while brushing your teeth.
- b) Using a lot of water while taking a bath.
- c) Water leaking from pipes.
- d) Watering plants using a hosepipe.

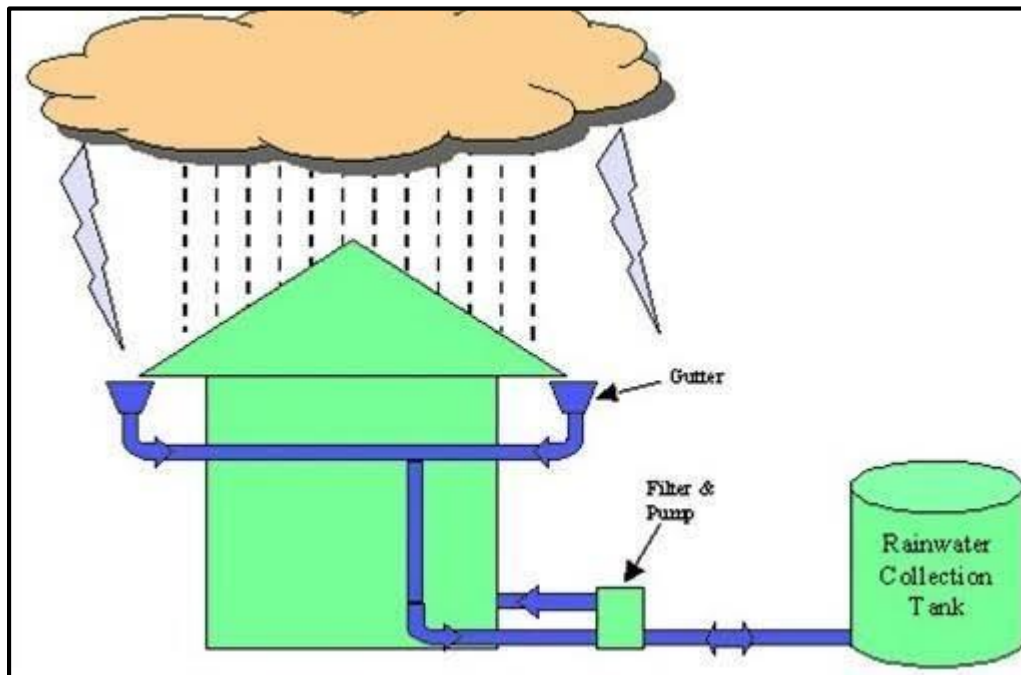
Water can be wasted at school in the ways below.

- a) Leaking pipes and taps.
- b) Learners leave taps running while washing hands.
- c) Watering the school garden using hosepipes.

## **Water conservation**

Water is important in life. Water should be used well. We should avoid wasting it. Water conservation is saving water by using it carefully, wisely and by preventing its waste.

## Methods of conserving water at home and school



Water can be conserved through reducing, reusing and recycling.

- a) Reducing water means using less water in our daily activities.
- b) Reusing water means using water more than once for different purposes.
- c) Recycling water means treating used water so it can be used again.

## **Reusing water**

The following are some of the ways we reuse water.

- a) The water remaining from cleaning and rinsing clothes is used to clean the floors of houses.
- b) Water used to clean the floor is sprinkled on the dusty ground.
- c) Water used to wash clothes is used to wash the car.

## **Reducing water wastage**

The following are some of the ways of reducing water wastage.

- a) We should not use running water while brushing our teeth.
- b) We should use less water when bathing, washing clothes and washing dishes.
- c) We should repair broken or leaking pipes.
- d) We should turn off taps when not in use.

## **Recycling water**

Recycled water can be used to water gardens, flush toilets or wash cars. You should not drink or use recycled water to cook or bathe.

## **Importance of conserving water**

- a) If we reduce the amount of water that we use, we will have more water to use in the future at home and in school.
- b) Using less water keeps costs low. By using various water conservation methods, you save money, which you can use in other ways.

Conserving water also conserves energy.

- d) Water conservation reduces the effects of drought and water shortages.
- e) Saving water helps to preserve our environment.



### **Self-assessment**

In your notebook, write the answer to each statement.

1. Explaining the meaning of water conservation in the environment.

A. I need more practice.

B. I can do this well.

C. I can do this very well.

2. Describing methods of conserving water at home and school.

A. I need more practice.

B. I can do this well.

C. I can do this very well.

3. Outlining importance of conserving water at home and school.

A. I need more practice.

B. I can do this well.

C. I can do this very well.



# **FORCE AND ENERGY**

**Force** is a push or a pull that is applied on a body or object.

## **Types of forces**

In nature, there are two important forces that affect how things move. These are the force of **gravity** and the force of **friction**.

a) The force of gravity is what keeps us on the ground. It also makes things fall to the Earth.

b) The force of friction is a force that resists the motion of objects in contact with each other. It occurs when two surfaces rub against each other.

### **Force of gravity in nature**

Gravity is a force that exists between objects that have mass. It keeps everything pulled towards the ground. It pulls us down towards the ground and holds us to it. All the objects in the activity were pulled down due to gravity

### **Force of friction in nature**

#### **Effects of friction**

When objects rub on rough surfaces, they stop faster than smooth surfaces. This is because rough surfaces experience higher friction than smooth surfaces. Friction affects things in the following ways.

a) It makes it hard for things to slide or move past each other.

b) It makes things slow down and stop when you push them.

c) Friction can make things warm up. This happens when you rub them together.

d) It helps us grip things and prevents us from slipping.

e) Friction can make things wear out or get smoother over time.

### **Ways of minimizing friction between surfaces of moving bodies**

The following are ways of minimizing friction between surfaces.

a) Smoothing surfaces: Making surfaces smoother allows objects to slide or roll more easily.

b) Greasing and oiling: Grease and oil reduce contact between objects. They make objects slide past each other more smoothly.

c) Use of Rollers: Rollers allow objects to roll instead of sliding. This reduces friction.

d) Ball Bearings: Ball bearings are small balls placed between two surfaces. They roll to reduce friction. This allows surfaces to move smoothly over each other reducing friction.

## Effects of force on an object

- Force can cause change of direction of movement
- Force can change shape of an object
- Force can start and stop movement of an object.
- A force of push moves an object away
- A force of pull moves an object towards you.

## Safety precautions when dealing with force

Protect your body when dealing with force by

- Wearing gloves to protect hands
- Wearing a headgear to protect the head
- Wearing leg guards to protect the legs

## Uses of force in daily life

Force is used in various everyday activities and situations. The following are some examples.

a) Wheelbarrow: A wheelbarrow uses force to lift and transport heavy loads.

b) Tug of war: Tug of war is a game that demonstrates force. Teams pull in opposite directions. They apply force to try to move the other team.

c) Pulling and pushing a handcart: Pulling a handcart requires applying force to move it forward. It involves applying force to keep it moving. The force also helps in overcoming the force of friction.

- d) Ox cart: An ox cart uses the force of an ox (animal) to pull heavy loads.
- e) Pushing a bicycle: Pushing a bicycle requires applying force to move it forward. The force you apply helps overcome the force of friction.
- f) Falling bodies: Falling bodies demonstrate the force of gravity. The force pulls objects towards the Earth. When objects fall, gravity pulls them downward.

### **Application of force**

Force is important for many reasons. It is applied in various fields and activities of our lives. The following are some ways in which force is applied.

- a) Transportation: Force is used in vehicles to help them move forward for example in car engines and pedals on bicycles.
- b) Construction: Force is applied to lift and move heavy objects, for example cranes when lifting building materials.
- c) Sports: Force is used to throw, kick or hit objects in games like soccer, basketball and baseball.
- d) Musical instruments: Force is used to produce sound, for example when plucking guitar strings or blowing air into a flute.
- e) Healthcare: Force is used in medical procedures, for example when applying pressure to stop bleeding.
- f) Manufacturing: Force is used in assembly lines to shape, mould and join materials.



### Self-assessment

In your notebook, write the answer to each statement.

1. Describing types of forces in nature.

A. I need more practice.

B. I can do this well.

C. I can do this very well.

2. Demonstrating the effects of force in daily life.

A. I need more practice.

B. I can do this well.

C. I can do this very well.

3. Describing the uses of force in daily life.

A. I need more practice.

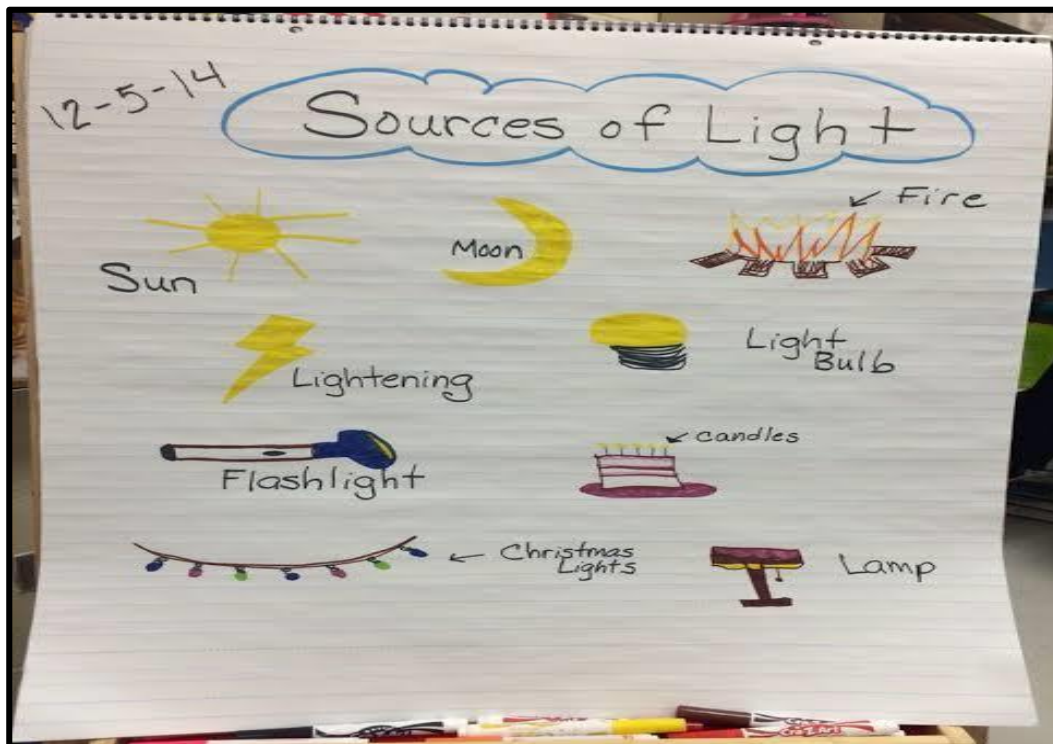
B. I can do this well.

C. I can do this very well.

# Light

Light is a form of energy that helps us see objects.

## Sources of light in nature



Things that produce light are called sources of light.

Examples include the sun, stars, fire, light bulbs, torches, lamps, candles and flashlights. Some animals are also sources of light for example a firefly and a glowworm.



## ***The main source of light is the sun.***

Natural sources of light are sources of light that are not made by people, for example the sun. Artificial sources of light are the sources of light made by people. Examples are lamps and light bulbs.

## **Ways of lighting a house**

The following are some of the ways of lighting a house.

- a) Opening windows during the day.
- b) Using translucent roofing materials.
- c) Using artificial lighting such as the use of lamps, electric bulbs and candles.

## **Uses of light**

Light is very helpful in our daily activities. The following are some of the ways we use light.

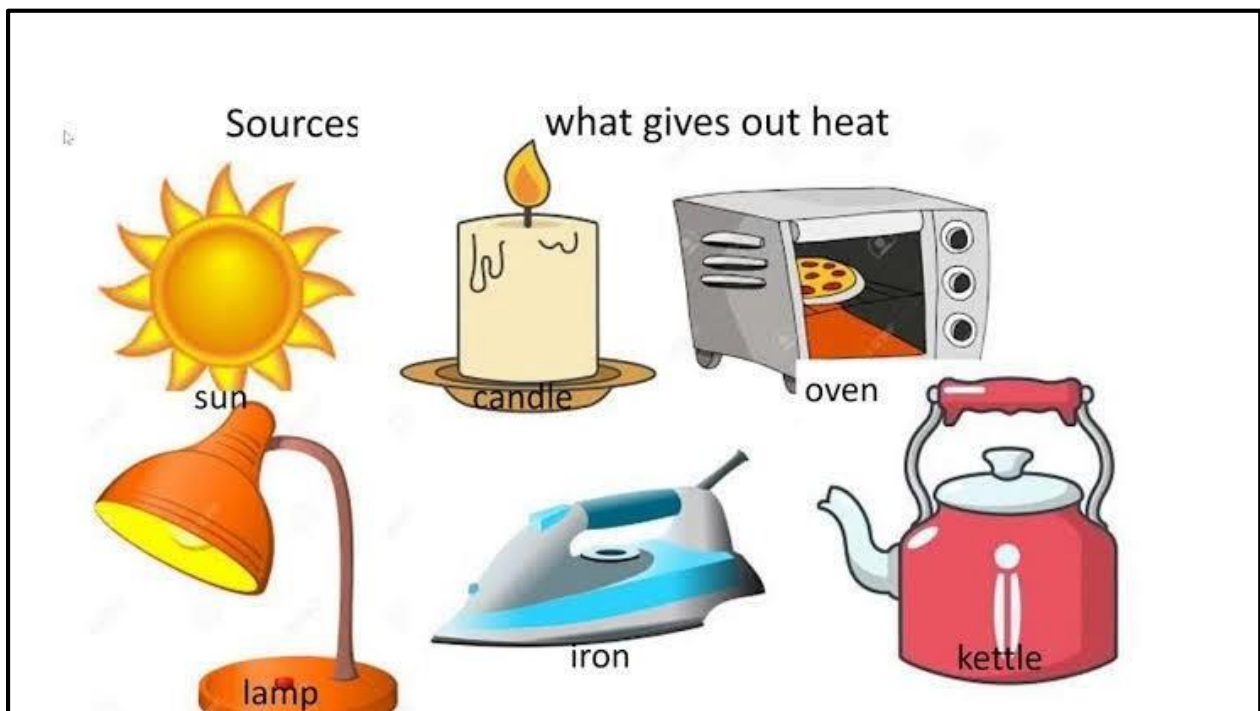
1. Light gives us the ability to see things.
2. It is used for safety.
3. Light enables us to read comfortably.
4. It also discourages pests from attacking our crops.
5. It discourages insects from the houses.

# Heat energy

Heat is a form of energy. It is the condition of something being warm or hot.

## Sources of heat

Things that make other things feel warm or hot are called sources of heat. They can be things like the sun, fire, electricity and gas.



## Uses of heat

The following are some uses of heat.

- a) Keeping warm: Heat is used to keep us warm in cold weather. Heat warms the house. Heat also gives chicks warmth. The warmth helps the chick grow and develop until it is ready to hatch.
- b) Drying: Heat is used to dry things like wet clothes or grains. Heat from the sun removes the water from wet clothes or grains.
- c) Cooking: We use heat to cook food. Heat makes the food safe to eat.
- d) Food preservation: Heat is used to preserve food. This can be done by drying it to kill germs. The food stays safe to eat for a long time. It also prevents food from spoiling.

## Safety measures when handling heat

The actions taken to prevent accidents, injuries or harm are known as safety measures. It is important to observe safety measures when handling heat.

The following are safety measures and practices when using heat.

- a) Use of kitchen gloves: Always wear kitchen gloves when handling hot pots, pans or dishes. This protects your hands from burns.
- b) Avoid direct contact with open fire: Keep a safe distance from open flames on stoves or grills. Use long utensils to handle food over heat sources.
- c) Use appropriate clothing: Wear clothing that covers your skin. This protects you from heat and not spills. Avoid loose clothing that could catch fire.

## Conduction of Heat

- Heat moves from one end of the metal rod to the other through **conduction**.
- Conduction is the transfer of heat in solids.

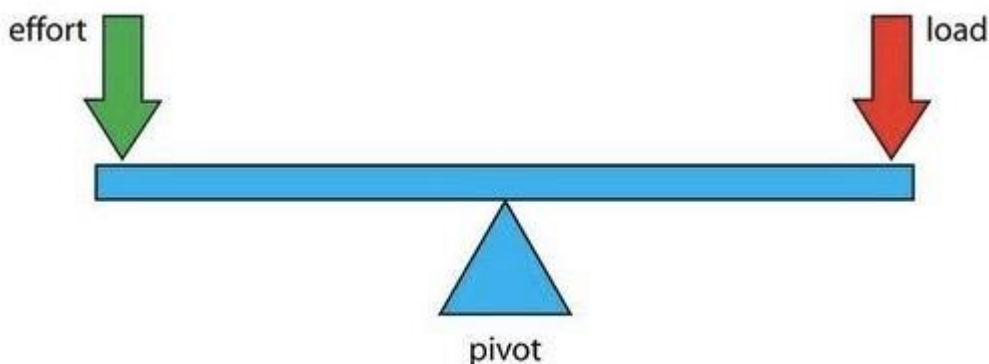
## Good and Poor Conductors of Heat

- Materials that allow heat to pass through are called **good conductors**.
- Materials that do not allow heat to pass through are called **poor conductors**.
- Cooking utensils are made of good conductors of heat to allow heat to pass through for easy cooking.
- Handles of cooking utensils are made of poor conductors of heat to prevent accident through burning.

## Machines

### Levers

- A lever is a simple machine used to make work easier.
- There are many types of levers we use in our day to day life.



## Parts of Levers

- The turning points is called **fulcrum**.
- The force applied to do work is called **effort**.
- The work being done is called **load**.

## Weather and the Sky: The Clouds

### Introduction to the Clouds

- Clouds have different shapes and colours.
- The types of clouds in the sky are:

1. **Cumulus clouds.**
2. **Nimbus clouds.**
3. **Cirrus clouds.**
4. **Stratus clouds**

## Nimbus Clouds

### Characteristics of Nimbus Clouds

1. They are dark grey in colour.
2. They appear low in the sky.
3. They cover large part of the sky and are grey in colour.
4. They indicate heavy rainfall which is accompanied by lightning and thunderstorms.



## Cirrus Clouds

### Characteristics of Cirrus Clouds

1. They appear whitish.
2. They look like balls of cotton wool.
3. They are high in the sky.
4. They produce little rain.



## Stratus Clouds

### Characteristics of Stratus Clouds

1. They look like white sheet covering the sky
2. The sheets are arranged in the sky.
3. They appear low sometimes hanging like mountains



## Other bodies Observed in the Sky at Night

1. Moon
2. Stars
3. Satellites